

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/538,041B  
Source: 1 Fw0  
Date Processed by STIC: 7/25/06

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/538,041B

TIME: 12:38:36

Input Set : A:\Q88285 Seq List.TXT

Output Set: N:\CRF4\07252006\J538041B.raw

4 <110> APPLICANT: TOOLGEN, Inc.  
 6 <120> TITLE OF INVENTION: Regulatory Zinc Finger Proteins  
 8 <130> FILE REFERENCE: Q88285  
 10 <140> CURRENT APPLICATION NUMBER: US 10/538,041B  
 11 <141> CURRENT FILING DATE: 2005-06-08  
 13 <150> PRIOR APPLICATION NUMBER: US 60/431,892  
 14 <151> PRIOR FILING DATE: 2002-12-09  
 16 <160> NUMBER OF SEQ ID NOS: 129  
 18 <170> SOFTWARE: PatentIn version 3.2  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 23  
 22 <212> TYPE: PRT  
 23 <213> ORGANISM: Homo sapiens  
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 27 Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu  
 28 1 5 10 15  
 30 Arg Arg His Gly Arg Thr His  
 31 20  
 34 <210> SEQ ID NO: 2  
 35 <211> LENGTH: 23  
 36 <212> TYPE: PRT  
 37 <213> ORGANISM: Homo sapiens  
 39 <400> SEQUENCE: 2  
 41 Tyr Ser Cys Gly Ile Cys Gly Lys Ser Phe Ser Asp Ser Ser Ala Lys  
 42 1 5 10 15  
 44 Arg Arg His Cys Ile Leu His  
 45 20  
 48 <210> SEQ ID NO: 3  
 49 <211> LENGTH: 23  
 50 <212> TYPE: PRT  
 51 <213> ORGANISM: Homo sapiens  
 53 <400> SEQUENCE: 3  
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 56 1 5 10 15  
 58 Asn Arg His Arg Arg Thr His  
 59 20  
 62 <210> SEQ ID NO: 4  
 63 <211> LENGTH: 23  
 64 <212> TYPE: PRT  
 65 <213> ORGANISM: Homo sapiens  
 67 <400> SEQUENCE: 4  
 69 Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu  
 70 1 5 10 15

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72 Thr Arg His Gln Lys Ile His

73 20

76 &lt;210&gt; SEQ ID NO: 5

77 &lt;211&gt; LENGTH: 23

78 &lt;212&gt; TYPE: PRT

79 &lt;213&gt; ORGANISM: Homo sapiens

81 &lt;400&gt; SEQUENCE: 5

83 Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu

84 1 5 10 15

86 Thr Thr His Lys Ile Ile His

87 20

90 &lt;210&gt; SEQ ID NO: 6

91 &lt;211&gt; LENGTH: 23

92 &lt;212&gt; TYPE: PRT

93 &lt;213&gt; ORGANISM: Homo sapiens

95 &lt;400&gt; SEQUENCE: 6

97 Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu

98 1 5 10 15

100 Thr Arg His Lys Lys Ser His

101 20

104 &lt;210&gt; SEQ ID NO: 7

105 &lt;211&gt; LENGTH: 23

106 &lt;212&gt; TYPE: PRT

107 &lt;213&gt; ORGANISM: Homo sapiens

109 &lt;400&gt; SEQUENCE: 7

111 Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu

112 1 5 10 15

114 Thr Val His Gln Lys Ile His

115 20

118 &lt;210&gt; SEQ ID NO: 8

119 &lt;211&gt; LENGTH: 23

120 &lt;212&gt; TYPE: PRT

121 &lt;213&gt; ORGANISM: Homo sapiens

123 &lt;400&gt; SEQUENCE: 8

125 Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu

126 1 5 10 15

128 Ile Arg His Gln Arg Thr His

129 20

132 &lt;210&gt; SEQ ID NO: 9

133 &lt;211&gt; LENGTH: 25

134 &lt;212&gt; TYPE: PRT

135 &lt;213&gt; ORGANISM: Homo sapiens

137 &lt;400&gt; SEQUENCE: 9

139 Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp

140 1 5 10 15

142 Glu Leu Asn Arg His Lys Lys Arg His

143 20 25

146 &lt;210&gt; SEQ ID NO: 10

147 &lt;211&gt; LENGTH: 23

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148 <212> TYPE: PRT
149 <213> ORGANISM: Homo sapiens
151 <400> SEQUENCE: 10
154 Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
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157 Lys Thr His Thr Arg Thr His
158          20
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162 <211> LENGTH: 23
163 <212> TYPE: PRT
164 <213> ORGANISM: Homo sapiens
166 <400> SEQUENCE: 11
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171 Thr Arg His Gln Arg Ile His
172          20
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176 <211> LENGTH: 23
177 <212> TYPE: PRT
178 <213> ORGANISM: Homo sapiens
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185 Ile Arg His Gln Arg Thr His
186          20
189 <210> SEQ ID NO: 13
190 <211> LENGTH: 23
191 <212> TYPE: PRT
192 <213> ORGANISM: Homo sapiens
194 <400> SEQUENCE: 13
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199 Asn Val His Arg Arg Ile His
200          20
204 <210> SEQ ID NO: 14
205 <211> LENGTH: 23
206 <212> TYPE: PRT
207 <213> ORGANISM: Homo sapiens
209 <400> SEQUENCE: 14
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214 Arg Arg His Glu Thr Thr His
215          20
218 <210> SEQ ID NO: 15
219 <211> LENGTH: 23
220 <212> TYPE: PRT
221 <213> ORGANISM: Homo sapiens
223 <400> SEQUENCE: 15
225 Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu

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Input Set : A:\Q88285 Seq List.TXT

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228 Ile Arg His Gln Arg Ile His
229          20
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233 <211> LENGTH: 23
234 <212> TYPE: PRT
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 16
239 Tyr Arg Cys Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu
240 1          5          10          15
242 Thr Arg His Lys Arg Ile His
243          20
246 <210> SEQ ID NO: 17
247 <211> LENGTH: 23
248 <212> TYPE: PRT
249 <213> ORGANISM: Homo sapiens
251 <400> SEQUENCE: 17
254 Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
255 1          5          10          15
257 Asn Val His Lys Arg Thr His
258          20
261 <210> SEQ ID NO: 18
262 <211> LENGTH: 23
263 <212> TYPE: PRT
264 <213> ORGANISM: Homo sapiens
266 <400> SEQUENCE: 18
268 Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu
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271 Thr Arg His Met Lys Lys Ser
272          20
275 <210> SEQ ID NO: 19
276 <211> LENGTH: 24
277 <212> TYPE: PRT
278 <213> ORGANISM: Artificial
280 <220> FEATURE:
281 <223> OTHER INFORMATION: Artificial zinc finger domain
283 <400> SEQUENCE: 19
285 Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Asp Ser Ser Asn Leu
286 1          5          10          15
288 Gln Arg His Val Arg Asn Ile His
289          20
292 <210> SEQ ID NO: 20
293 <211> LENGTH: 83
294 <212> TYPE: PRT
295 <213> ORGANISM: Artificial
297 <220> FEATURE:
298 <223> OTHER INFORMATION: artificial zinc finger protein
300 <400> SEQUENCE: 20
302 Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu

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303 1           5           10           15
304 Thr Arg His Gln Lys Ile His Thr Gly Glu Lys Pro Phe Gln Cys Lys
305           20           25           30
307 Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr
308           35           40           45
310 Arg Thr His Thr Gly Glu Lys Pro Tyr Ile Cys Arg Lys Cys Gly Arg
311           50           55           60
313 Gly Phe Ser Arg Lys Ser Asn Leu Ile Arg His Gln Arg Thr His Thr
314 65           70           75           80
316 Gly Glu Lys
320 <210> SEQ ID NO: 21
321 <211> LENGTH: 83
322 <212> TYPE: PRT
323 <213> ORGANISM: Artificial
325 <220> FEATURE:
326 <223> OTHER INFORMATION: artificial zinc finger protein
328 <400> SEQUENCE: 21
330 Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
331 1           5           10           15
333 Thr Thr His Lys Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met
334           20           25           30
336 Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln
337           35           40           45
339 Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg
340           50           55           60
342 Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr
343 65           70           75           80
345 Gly Glu Lys
349 <210> SEQ ID NO: 22
350 <211> LENGTH: 83
351 <212> TYPE: PRT
352 <213> ORGANISM: Artificial
354 <220> FEATURE:
355 <223> OTHER INFORMATION: artificial zinc finger protein
357 <400> SEQUENCE: 22
359 Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu
360 1           5           10           15
362 Thr Arg His Gln Lys Ile His Thr Gly Glu Lys Pro Phe Gln Cys Lys
363           20           25           30
365 Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr
366           35           40           45
368 Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Met Glu Cys Gly Lys
369           50           55           60
371 Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln Arg Ile His Thr
372 65           70           75           80
374 Gly Glu Lys
378 <210> SEQ ID NO: 23
379 <211> LENGTH: 83
380 <212> TYPE: PRT

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 07/25/2006  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:123; Xaa Pos. 2,3,4,5,6,8,9,10,11,12,13,14,15,16,17,18,19,21,22,23,24  
Seq#:123; Xaa Pos. 25  
Seq#:124; Xaa Pos. 2,3,4,5,6,8,9,10,11,12,14,17,18,21,22,23,24,25  
Seq#:125; Xaa Pos. 3,4,6

**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42  
Seq#:43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66  
Seq#:67,68,69,70,71,123,124,125,126,127,128

## VERIFICATION SUMMARY

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Input Set : A:\Q88285 Seq List.TXT

Output Set: N:\CRF4\07252006\J538041B.raw

L:3276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:0  
L:3279 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:16  
L:3348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:0  
L:3351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:16  
L:3381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:0